

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

MUNDRA SOLAR PV LIMITED,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 1:25-cv-00462-UNA
)	
FIRST SOLAR, INC.,)	JURY TRIAL DEMANDED
)	
Defendant.)	

COMPLAINT FOR DECLARATORY JUDGMENT OF NON-INFRINGEMENT

Plaintiff Mundra Solar PV Limited (“Plaintiff” or “MSPVL”) hereby alleges the following in support of its Complaint for Declaratory Judgment of Non-Infringement against Defendant First Solar, Inc. (“Defendant” or “First Solar”):

NATURE OF THE ACTION

1. This is an action seeking a declaratory judgment that MSPVL does not infringe any claim of United States Patent No. 9,130,074 (the “’074 patent”) or any claim of United States Patent No. 9,666,732 (the “’732 patent”), and for any other relief the Court deems just and proper.
2. MSPVL brings this action under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202, and the patent laws of the United States, 35 U.S.C. § 101, *et seq.*
3. MSPVL seeks a declaratory judgment of non-infringement because Defendant alleges that MSPVL’s manufacturing and sale of N-type TOPCon solar cells and solar modules, including those in MSPVL’s Shine® series, infringe claims of the ’074 and ’732 patents.

THE PARTIES

4. MSPVL is formed under the laws of India and has its principal place of business at Survey No. 180/P & Others, Village Tunda Vandh, Taluka Mundra, Kutch 370 435, Gujarat, India.

5. On information and belief, First Solar is a corporation formed under the laws of Delaware with a principal place of business at 350 West Washington Street, Suite 600, Tempe, Arizona, 85288. On information and belief, First Solar has a registered agent for service of process in this District at 1209 Orange Street, Wilmington, Delaware, 19801.

6. Defendant purports to be the owner of the '074 and '732 patents.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States, 35 U.S.C. § 101, *et seq.*, and under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

8. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has personal jurisdiction over Defendant. Defendant is a corporation organized and existing under the laws of the State of Delaware. Defendant has purposefully availed itself of the rights and benefits of the laws of the State of Delaware. Defendant has directed its patent enforcement activities at this District. Defendant should reasonably anticipate being subject to Court proceedings here.

10. Venue is proper in this District under 28 U.S.C. § 1391.

PATENTS-IN-SUIT

11. The '074 patent is entitled "High-efficiency solar cell structures and methods of manufacture" and it issued on September 8, 2015, to TetraSun, Inc. of Saratoga, California. Defendant purports to own the '074 patent. A copy of the '074 patent is attached as Exhibit A.

12. The '732 patent is entitled "High-efficiency solar cell structures and methods of manufacture" and it issued on May 30, 2017, to TetraSun of San Jose, California. The '732 patent purports to claim priority through the same provisional application as the '074 patent. Defendant purports to own the '732 patent. A copy of the '732 patent is attached as Exhibit B.

13. The '074 and '732 patents are directed to methods for surface passivation of solar cells, including heterojunction solar cells, also known as HJT solar cells. *See, e.g.*, Exhibit A at col. 3:49-4:19.

14. HJT solar cells typically contain amorphous silicon layers deposited on both sides of the substrate to act as conductive and passivating layers.

15. To manufacture an HJT solar cell, it was known at the time the '074 and '732 patent applications were filed to form amorphous silicon layers on both sides of the substrate to provide shortened charge carrier paths to non-invasive electrodes.

16. To manufacture an HJT solar cell, it was known at the time the '074 and '732 patent applications were filed to heavily dope the p-type conductive and passivating amorphous silicon layer to create a p-n junction on the front side of the solar cell.

17. The '074 and '732 patents do not mention applying this technology to "TOPCon."

18. Neither the '074 patent nor the '732 patent discloses or claims methods for manufacturing a TOPCon solar cell.

BACKGROUND

19. On April 1, 2025, Defendant, through its outside litigation counsel at the Cravath law firm, sent a letter directed to Adani Solar USA, Inc. (hereinafter the "Demand Letter"). The Demand Letter alleges infringement of the '074 and '732 patents by the manufacture and sale of Shine® series TOPCon products (the "Accused Products").

20. According to the Demand Letter, Defendant “issued a press release announcing its ownership of patents related to the manufacturing of Tunnel-Oxide Passivated Contact (“TOPCon”) crystalline silicon photovoltaic solar cells.”

21. According to the Demand Letter, Defendant’s intention is “to pursue enforcement, licensing, and/or other measures to safeguard its TOPCon patent rights.” An excerpt of the Demand Letter is shown below.

As you are probably aware, on July 19, 2024, First Solar issued a press release announcing its ownership of patents related to the manufacturing of Tunnel-Oxide Passivated Contact (“TOPCon”) crystalline silicon photovoltaic solar cells. In First Solar’s press release, its Executive Vice President, General Counsel and Secretary, Jason Dymbort, expressed the company’s intention to pursue enforcement, licensing, and/or other measures to safeguard its TOPCon patent rights and noted that the company has been investigating several leading crystalline silicon solar manufacturers for potential infringement of the TOPCon patents. We have been retained to lead First Solar’s licensing program for the TOPCon patents and to enforce those patents against companies that are using them without permission but refuse to take a license.

22. According to the Demand Letter, Defendant hired litigation counsel at the Cravath law firm “to enforce those patents against companies that are using them without permission but refuse to take a license” and that Adani Solar USA, Inc. is “one of the companies that is using First Solar’s TOPCon patents without a license” by virtue of the manufacturing and sale of the Accused Products.

23. According to the Demand Letter, the Accused Products “are manufactured by the method recited in Claim 1” of the ’074 patent. An excerpt of the Demand Letter is shown below.

Adani Solar requires a license because it makes and sells TOPCon solar cells and solar panels (“TOPCon products”), its N-Type solar cells and solar modules (including those in the Shine TopCon Series lines)¹, that are manufactured using First Solar’s patented manufacturing methods. By way of illustration only, Adani Solar’s TOPCon products are manufactured by the method recited in **Claim 1 of U.S. Pat. No. 9,130,074**. As n-type TOPCon products, the Adani Solar products must have an n-type silicon central substrate, an interface passivation layer (or tunnel oxide layer) on the backside of the substrate and a conductive and passivating layer of doped poly-silicon deposited on the backside of the interface passivation layer. Adani Solar claims high efficiency (22.3%²) and high bifaciality. Such high levels of efficiency and bifaciality can only be achieved in a TOPCon cell by heating the cell well above 500° C, which causes dopant from the poly silicon layer to be diffused through the interface passivation layer. The Adani Solar products have electrodes connected to the backside of the conductive and passivating layer. Because of the diffusion of the dopant through the interface passivation layer, the charge carrier flow paths from these contacts to the central substrate are shortened. Thus, the Adani Solar TOPCon products are manufactured using the method of Claim 1.

24. According to the Demand Letter, the Accused Products “are also covered by several dependent claims of the ’074 patent” including claim 4 and claim 8.

25. According to the Demand Letter, Defendant “reserves the right to take any action, including legal action to enforce its patent portfolio, against Adani Solar at any time and without further notice.” An excerpt of the Demand Letter is shown below.

Please be advised that nothing in this letter is, or should be considered, a waiver of any rights or claims First Solar has against Adani Solar. First Solar reserves the right to take any action, including legal action to enforce its patent portfolio, against Adani Solar at any time and without further notice.

26. On February 25, 2025, First Solar filed a complaint in this District alleging infringement of the ’074 patent by Jinko Solar. The case is styled as *First Solar, Inc. v. JinkoSolar Holding Co., Ltd., et al.*, No. 1:25-cv-00223 (D. Del. Feb. 25, 2025). Jinko Solar is a manufacturer of TOPCon solar products.

27. MSPVL manufactures Accused Products in India and exports Accused Products from India to customers in the United States. Adani Solar USA, Inc. does not make, use, sell, offer to sell, or import Accused Products.

28. An actual and justiciable controversy exists under 28 U.S.C. §§ 2201 and 2202 between MSPVL and the Defendant as to whether MSPVL is infringing or has infringed any claim of the ’074 patent or ’732 patent by virtue of MSPVL’s manufacturing or sale of the Accused Products.

**COUNT I – DECLARATORY JUDGMENT OF
NON-INFRINGEMENT OF THE ’074 PATENT**

29. MSPVL incorporates by reference paragraphs 1-28 above as if fully set forth herein.

30. Defendant claims to own all right, title, and interest in the ’074 patent.

31. The Accused Products are not manufactured using any method claimed in the '074 patent, at least because MSPVL does not perform the following method steps in independent claim 1: “providing thermal treatment at a temperature of about 500° C. or higher, the thermal treatment crystallizing, at least in part, the at least one conductive and passivating layer and facilitating diffusion of the dopant from the at least one conductive and passivating layer through the at least one interface passivation layer” and “providing metallization as electrodes which directly contact the at least one conductive and passivating layer following the thermal treatment thereof, wherein the dopant diffused through the at least one interface passivation layer provides shortened charge carrier flow paths between the substrate and the electrodes through the at least one conductive and passivating layer and the at least one interface passivation layer.”

32. Claims 2 through 8 in the '074 patent depend from claim 1. The Accused Products are not manufactured using any method claimed in claims 2 through 8 at least because MSPVL does not perform method steps in claim 1.

33. An actual and justiciable controversy has arisen and now exists between MSPVL and Defendant concerning whether MSPVL infringes any claim of the '074 patent.

34. A judicial declaration is necessary and appropriate so that MSPVL may ascertain its rights in view of Defendant's allegations of infringement of the claims of the '074 patent.

35. MSPVL seeks a judgment declaring that MSPVL does not directly or indirectly infringe any claim of the '074 patent, either literally or under the doctrine of equivalents.

**COUNT II – DECLARATORY JUDGMENT OF
NON-INFRINGEMENT OF THE '732 PATENT**

36. MSPVL incorporates by reference paragraphs 1-35 above as if fully set forth herein.

37. Defendant claims to own all right, title, and interest in the '732 patent.

38. The Accused Products are not manufactured using any method claimed in the '732 patent, at least because MSPVL does not perform the following method steps in independent claim 1: “thermally treating the amorphous silicon-containing compound to diffuse the oxygen dopant, at least in part, into the upper surface of the substrate to form an oxide layer over the substrate, the oxide layer defining the interface passivation layer,” “wherein the thermally treating also diffuses at least a portion of the conductive dopant throughout the interface passivation layer to facilitate electrical connection to the substrate,” and “providing at least one electrode over the passivating film, wherein the conductive dopant within the passivating film and throughout the interface passivation layer provides direct electrical connection between the at least one electrode and the substrate.”

39. Claims 2 through 9 in the '732 patent depend from claim 1. The Accused Products are not manufactured using any method claimed in claims 2 through 9 at least because MSPVL does not perform method steps in claim 1.

40. An actual and justiciable controversy has arisen and now exists between MSPVL and Defendant concerning whether MSPVL infringes any claim of the '732 patent.

41. A judicial declaration is necessary and appropriate so that MSPVL may ascertain its rights in view of Defendant's allegations of infringement of the claims of the '732 patent.

42. MSPVL seeks a judgment declaring that MSPVL does not directly or indirectly infringe any claim of the '732 patent, either literally or under the doctrine of equivalents.

JURY DEMAND

MSVPL demands a jury trial on all issues and claims so triable.

PRAYER FOR RELIEF

WHEREFORE, MSPVL hereby prays for judgment as follows:

- A. Declare that MSPVL does not directly or indirectly infringe the '074 patent, either literally or under the doctrine of equivalents, and that it is not liable for damages or injunctive relief based on any claim in the '074 patent;
- B. Declare that MSPVL does not directly or indirectly infringe the '732 patent, either literally or under the doctrine of equivalents, and that it is not liable for damages or injunctive relief based on any claim in the '732 patent;
- C. Declare that judgment be entered in favor of MSPVL and against Defendant on each of MSPVL's claims;
- D. Find that this is an exceptional case under 35 U.S.C. § 285;
- E. Award MSPVL its costs and attorneys' fees in connection with this action; and
- F. Award MSVPL such other and further relief as the Court deems just and proper.

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Dated: April 15, 2025